

**Amendments to the Claims:**

Please revise the claims as follows:

Claims 1 – 42 (canceled)

43. (currently amended) A slurry composition for a mold comprising  
about 45% to about 80% by weight alumina;  
about 10% to about 30% by weight silicon carbide;  
about 10% to about 50% by weight colloidal silica binder;  
about 0.01% to about 1% by weight ~~welan~~ polysaccharide gum;  
and a setting agent.
44. (previously presented) The composition of claim 43, wherein the silicon carbide has an average particle diameter of about 30 micrometers to about 3.5 millimeters.
45. (previously presented) The composition of claim 43, wherein the silicon carbide is present at about 12% to about 25% by weight.
46. (previously presented) The composition of claim 43, wherein the alumina component is present at about 50% to about 65% by weight.
47. (previously presented) The composition of claim 43, wherein the alumina component comprises a material selected from the group consisting of brown fused alumina, white fused alumina, tabular alumina, calcined alumina, and mixtures thereof.
48. (previously presented) The composition of claim 43, wherein the alumina component comprises particles of screen size 6x14 at about 0% to about 10% by weight of the composition, particles of screen size 14x70

at about 40% to about 60% by weight of the composition, and particles of screen size -70 at about 2% to about 10% by weight of the composition.

49. (previously presented) The composition of claim 43, further comprising about 2% to about 6% by weight free carbon.

50. (previously presented) The composition of claim 49, wherein the free carbon is present in the form of pitch.

51. (previously presented) The composition of claim 43, further comprising 2% to about 5% by weight fumed silica.

52. (previously presented) The composition of claim 43, wherein the setting agent is present at about 0.05% to about 2% by weight.

53. (previously presented) The composition of claim 52, wherein the setting agent is magnesia.

54. (previously presented) The composition of claim 43, further comprising 0.05% to about 0.5% by weight polypropylene fiber.

55. (currently amended) A casting method, the method comprising:  
providing a meltable patterned substrate;  
coating the substrate with a slurry composition;  
allowing the slurry composition to set and form a mold; and  
removing the substrate from the mold;  
wherein the slurry composition comprises  
about 45% to about 80% by weight alumina;  
about 10% to about 30% by weight silicon carbide; ~~and~~  
about 10% to about 50% by weight colloidal silica; and

about 0.01% to about 1% by weight polysaccharide gum.

56. (previously presented) The method of claim 55, wherein the substrate is coated with the slurry composition by dipping the substrate into the slurry composition.

57. (previously presented) The method of claim 55, wherein the substrate is coated with the slurry composition by spraying the slurry composition onto the substrate.

58. (previously presented) The method of claim 55, wherein the substrate is coated with the slurry composition by brushing the slurry composition onto the substrate.

59. (previously presented) The method of claim 55, wherein the silicon carbide is present at about 15% to about 25% by weight of the slurry composition.

60. (previously presented) The method of claim 55, wherein the alumina component is present at about 50% to about 65% by weight of the slurry composition.

61. (previously presented) The method of claim 55, wherein the alumina component comprises a material selected from the group consisting of brown fused alumina, white fused alumina, tabular alumina, calcined alumina, and mixtures thereof.

62. (previously presented) The method of claim 55, wherein the slurry composition further comprises about 2% to about 6% by weight free carbon.

63. (previously presented) The method of claim 62, wherein the free carbon is present in the form of petroleum pitch.

64. (previously presented) The method of claim 55, wherein the slurry composition further comprises fumed silica at about 1% to about 5% by weight of the slurry composition.

65. (currently amended) The method of claim 55, wherein the slurry composition further comprises about 0.01% to about 1% by weight polysaccharide gum is welan gum.

66. (previously presented) The method of claim 55, wherein the slurry composition further comprises about 0.05% to about 2% by weight setting agent.

67. (previously presented) The method of claim 66, wherein the setting agent is magnesia.

68. (previously presented) The method of claim 55, wherein the slurry composition further comprises 0.05% to about 0.5% by weight polypropylene fiber.

69. (previously presented) The method of claim 55, wherein the alumina component comprises particles of screen size 6x14 at about 0% to about 10% by weight of the composition, particles of screen size 14x70 at about 40% to about 60% by weight of the composition, and particles of screen size -70 at about 2% to about 10% by weight of the composition.

70. (currently amended) A casting method, the method comprising:  
providing a meltable patterned substrate;  
coating the substrate with a slurry composition;  
allowing the slurry composition to form a mold; and  
removing the substrate from the mold;  
wherein the slurry composition comprises  
about 45% to about 65% by weight alumina;  
about 10% to about 30% by weight silicon carbide;  
about 10% to about 50% by weight colloidal silica; and  
about 0.01% to about 1% by weight welan gum.
71. (previously presented) The method of claim 70, further comprising  
providing a setting agent in the slurry composition, such that a set time can  
be controlled by varying the amount of setting agent.
72. (previously presented) The method of claim 70, wherein the set time  
is between 15 minutes and 10 hours.
73. (previously presented) The method of claim 70, wherein the setting  
agent is magnesia.
74. (previously presented) The method of claim 70, wherein the  
substrate is coated with no more than three coats of the slurry  
composition.
75. (previously presented) The method of claim 70, wherein the  
substrate is coated with no more than two coats of the slurry composition.
76. (previously presented) The method of claim 70, wherein the  
substrate is coated with a single coat of the slurry composition.

77. (previously presented) The method of claim 70, wherein the alumina component comprises particles of screen size 6x14 at about 0% to about 10% by weight of the composition, particles of screen size 14x70 at about 40% to about 60% by weight of the composition, and particles of screen size -70 at about 2% to about 10% by weight of the composition.

78. (new) The composition of claim 43 wherein the polysaccharide gum is welan gum.

**SUMMARY**

The Amendments to the claims are now in compliance with 37 CFR 1.121. If the Examiner has any remaining issues, he is invited to contact the undersigned attorneys for the Applicant via telephone if such communication would expedite this application.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Joseph Yosick", is written over a horizontal line.

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